THE

BRITISH JOURNAL

OF

CHILDREN'S DISEASES.

VOL. I. MARCH, 1904. No. 3.

Original Articles.

ON MENTAL DEFICIENCY IN CHILDREN.

BY G. E. SHUTTLEWORTH, B.A., M.D.,

Medical Expert, Rochester House Institution for Improvable Imbeciles, Metropolitan Asylums Board; Consulting Medical Officer, National Association for the Welfare of the Feeble-minded; formerly Medical Superintendent of the Royal Albert Asylum, Lancaster.

IN the present article it is proposed to set forth some of the leading characteristics of typical groups of mentally defective children, and to show their relations to diagnosis and prognosis, with remarks upon their etiology and pathology. In conclusion will be submitted some suggestions as to treatment and training.

The term *mental deficiency* is intended to include the several degrees of departure from the normal mental development of the child which are included in the terms idiocy, imbecility, and feeble-mindedness. The connotation of these terms respectively varies somewhat in the writings of different recognised authorities on the subject; and of late years there has been a benevolent but somewhat confusing tendency in this country—as previously in America—to use the word "feeble-minded" in a sense inclusive of the lower

grades of mental defect. While it must be admitted that feeble-mindedness, imbecility, and idiocy are but gradations in the severity of mental deficiency, and respectively denote a difference not of kind, but only of degree, it is certainly convenient to retain distinct terms to mark the gradations, both for scientific and sociological reasons. *Amentia* is, indeed, the inclusive scientific term, indicating a generic difference between *minus* conditions of mind dating from birth, or from so early an age as to preclude any previous definite manifestation of mental development, and the degenerative processes of dementia in later life; while insanity, which causes a perversion of developed mental faculties, though it may occur in childhood, stands in an entirely different category.

By far the larger number of cases of amentia essentially date from a period anterior to birth. This statement is, of course, at variance with what most parents are willing to admit, for they are naturally reluctant to recognise any tendency in themselves to the production of defective offspring. From certain statistics given in institution reports it would seem that the non-congenital outnumber the congenital cases; but a closer scrutiny of the statements made by parents, and subsequent acquaintance with the relatives, would demonstrate that many cases reported as acquired are in their essence congenital. To take one instance, eclampsia (infantile convulsions) is stated to have occurred in 32·58 per cent. of 1200 cases examined at one large institution; but it is very obvious that fits are readily assigned by parents as the cause of mental impairment when in truth they are but one of the evidences of innate nervous instability. Feeble-mindedness is frequently attributed to falls, though the true etiology will point to an antecedent condition of abnormal nervous impressionability, which is the more important factor. Not a few children suffer from infantile convulsions with no resulting mental enfeeblement, and probably the majority have falls, even on their heads, which, with a previously sound brain, do not produce traumatic imbecility. The primary division of cases of mental defect in children into—

(1) *The congenital or primary class,*

(2) *The non-congenital, acquired, or secondary class;*—

requires, therefore, to be made with much discrimination and caution.

From the pathological standpoint conditions of imperfect or irregular cerebral and nervous development must be carefully distinguished from those of premature degeneration. The latter, occurring early in life (as, *e. g.*, in some cases of infantile paralysis),

produce mental enfeeblement interfering with capacity for education which for practical purposes may be classed with amentia, though similar degenerative changes at a later period would tend to dementia.

Looking more closely at the so-called congenital class of cases, we shall find that it really consists of two groups, viz. (*a*) *those due to causes acting prior to birth;* (*b*) *those due to causes acting at birth.* With regard to the first group, we must necessarily consider the important subject of heredity; and in the most recent investigations —those of Dr. A. F. Tredgold,* who had the opportunity of scrutinising by personal inquiry the family history of 150 defective children in the pauper asylums of the county of London—it was found that in as many as 90 per cent. some adverse hereditary influence could be traced. So limited a number of cases affords, however, a slender basis for generalisation; and an examination of case-books, carefully compiled and revised in the light of experience,† with regard to 2380 children under the care of Dr. Fletcher Beach and the present writer at Darenth and the Royal Albert Asylum respectively, gave the following factors (in many cases concurrent) as present in the family histories, viz.:

Phthisical family history . .	28·31 per cent.
Hereditary mental weakness (insanity, imbecility, etc.) . . .	21·38 ,,
Epilepsy, or other marked neurosis .	20·00 ,,
Intemperance in parents (alcoholic) .	16·38 ,,
Consanguinity in parents or grandparents	4·20 ,,

Syphilis, commonly supposed to be a frequent cause of degeneracy in offspring, figured but insignificantly in these statistics, only to the extent of 1·17 per cent. of cases in which there were stigmata of inherited syphilis, or parental syphilis had been ascertained; but parents do not readily admit such a cause, and many syphilitic children die before attaining the age for institution treatment.

Passing to the second group, *those due to causes acting at birth,* we find in the statistics above referred to, the following figures:

Premature birth . .	3·52 per cent.
Difficult birth . .	17·55 ,,

Instrumental delivery is recorded in 3·31 per cent. of the cases, and asphyxia neonatorum was noted (by Dr. Beach) in 12·96 per cent. In 1·51 per cent. some accident to the child occurred, due probably to precipitate labour, and in 0·96 per cent. the imbecile was

* Mott's 'Archives of Neurology,' vol. i, p. 328 *et seq.*

† Hack Tuke's 'Dict. Psych. Med.,' vol. ii, p. 664.

one of twins. In 20·67 per cent. the imbecile was the firstborn of a family. Did space permit, it would be easy to show that the conditions of the mother leading to premature, difficult, or precipitate parturition were really the original cause of the trouble; and, in passing, one may just note that our statistics show that judicious forceps delivery is less harmful as regards mental impairment in the child than is unassisted, unduly prolonged labour. Primogeniture, which was noted in but little more than one fifth of the cases, cannot be regarded as a serious factor, for the average size of the families investigated was more than five.

It has already been stated that the non-congenital (or acquired) class of cases is much smaller than parents would have us believe. The more conversant one becomes with the histories of patients and their families, the stronger one's conviction grows that the accident, the illness, or the shock to which the mental defect is attributed, is but an incident in most cases, and not the original cause of the mental defect. The late Dr. Langdon-Down recognised this view, and suggested the term *developmental* to cover cases reputed to date from some crisis of development, *e. g.* the first or second dentition, pubescence, etc. Following the statistics already quoted, we may give, subject to the above considerations, the following percentages :

Eclampsia (infantile convulsions)	27·39 per cent.
Epilepsy (Darenth statistics)	11·52 „
Infantile, etc., paralyses	0·92 „
Traumatism (injury to head)	6·17 „
Fright or shock (mental)	3·06 „
Sunstroke	0·54 „
Febrile illnesses with brain complications (meningitis, atrophy, etc.)	5·96 „

We have already remarked on the significance of infantile convulsions, and similar criticisms would be appropriate with regard to many of the causes scheduled above. Over-pressure at school was an assigned cause in only 0·16 per cent. of the 2380 cases.

We must now cursorily glance at the typical groups into which mentally defective children may be divided. Some of these have definite physical characteristics, a knowledge of which is very helpful in prognosis, but it is not pretended that these are present in all defective children. Speaking generally, there is a lack of normal physical development, as of mental, in this class; and functional as well as organic defects characterise their nervous system. Broadly looking at mental characters, we may divide all mentally defectives into two large classes: (1) *those with under-acting nervous systems;*

(2) *those with over-acting nervous systems;* in other words—(1) *the dull and apathetic;* and (2) *the nervous and excitable.* In the former class (*e. g.* in the cretin), nerve-centre reaction-time is slow; in the latter, nerve is unduly irritable, tending to explosiveness, and ill-controlled. Highly neurotic and epileptic cases are instances. Want of power of sustaining attention is the common psychical characteristic of both classes. In the first it depends upon defect of energy; in the second, upon defect of inhibitory power.

Perhaps the larger number of cases of mental deficiency are not so much characterised by typical physical abnormalities as by a

Fig. 1.

departure in some way or other from the standard of development of normal children of similar age. In many may be discovered the so-called stigmata of degeneration, such as puny growth, ill-proportioned features, out-standing pointed ears, deformed jaws and palates, hare-lip, and traces of persistent fœtal structures such as epicanthic folds. Congenital heart-disease, with patulous foramen ovale, is not uncommon. Then there are faults in form and finish of the skull, and sometimes in addition, of the integumentary structures. Associated are defects of mental action—*e. g.* lack of "taking notice" in early infancy, and of speaking at the usual age—which gradually arouse anxiety; and in neurotic cases there is much

irregular or ill-regulated muscular movement. Such are the general features of the large group of primary mentally defectives called by Ireland "genetous," but perhaps preferably designated (as suggested by Tredgold) cases of "simple primary amentia."

There are, however, certain types which can be separated from the general mass of congenital cases by distinctive physical features. The first to be mentioned, as in this the diminutive and imperfectly shaped head testifies to arrest of development, is the *microcephalic*.

FIG. 2.

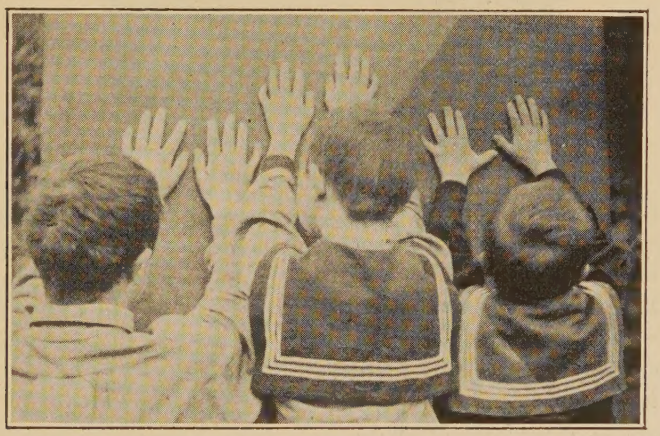
No arbitrary standard of measurement (*e. g.* a cranial circumference less than 17 inches, as has been proposed) is applicable to these cases, for peculiarity of form, such as is seen in the illustrations, (*e. g.* a rapidly receding, laterally ill-developed forehead, a somewhat pointed vertex and flattened occiput), is constantly associated in this variety with relatively reduced cranial dimensions (see Fig. 1). Contrasting with this we have the distended skull of the hydrocephalic type, some cases of which are of intra-uterine origin (see Fig. 2). But perhaps the most remarkable, as it is the most uniform, of all the types of primary amentia, is that designated Mongolian (Fig. 3). Without concerning ourselves with the theory of ethnic

degeneration, which induced the late Dr. Langdon-Down thus to designate this variety, we cannot fail to observe in English-born

Fig. 3.

cases of this type a certain physiognomical resemblance to the denizens of the Far East. The skull is a short oval flattened posteriorly.

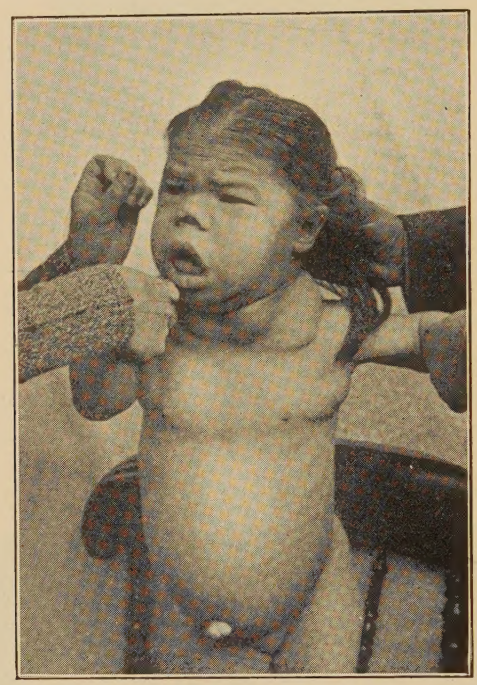
Fig. 4.



The palpebral fissures are often obliquely set and of almond shape; the nose is squat, usually flat at the bridge, with distended cartilages. The hands are often as broad as long, the

fingers being stumpy, and the little finger sometimes incurved towards the ring finger (see Fig. 4). There are also tegumentary defects: the skin is coarse, even furfuraceous; the hair of darkish tint, "wiry" in appearance. The mucous membrane of the lips is often cracked, and the tongue, which is large, marked with transverse fissures and presenting hypertrophied papillæ. Adenoids are

Fig. 5.



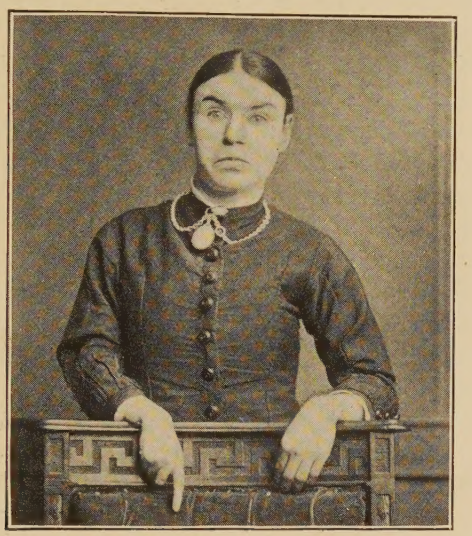
frequent. Children of this type seem to be more liable than others to cardiac imperfections; in fact, the whole bodily structure points to a lack of finish.

Another type of mental defect with very definite characteristics is that of sporadic cretinism (see Fig. 5), or (as Bourneville designates it) "myxœdematous idiocy." If not absolutely of primary origin, its symptoms develop so early in life that it may be classed as congenital, especially as it depends upon formative defect of the thyroid gland. The characteristics of this type are slow reaction and response, with dwarfed body, baggy skin, tumid abdomen (with frequent umbilical hernia), bowed legs, broad squat hands and feet.

The square-looking skull expanded laterally often reveals a depression over the site of the anterior fontanelle. The nose is short, often *retroussé*; the lips lax; and the tongue, enlarged, with thickened tip, is apt to project beyond the teeth. There is a malar blush in most cases. Growth is slow, and all the bodily and mental functions are notably retarded.

A passing reference may here be made to the class of achondroplasiacs, mistaken sometimes for cretins, but not necessarily mentally deficient. Symington and Thomson* define achondroplasia as "an absence, arrest, or perversion of the normal process of

Fig. 6.



endochondrial ossification of the most definite and universal character in every element of the skeleton in which the normal process usually takes place during intra-uterine life." These are usually intelligent but short-limbed dwarfs.

Before proceeding to cases of post-natal origin, we must look at the group which we may conveniently include under the name of cerebral infantile paralysis (Fig. 6). In these cases the degree of mental impairment varies considerably, varying probably with the extent of meningeal hæmorrhage at the time of birth. "Birth-palsies" have, indeed, been attributed by Gowers, McNutt, and others simply to

* Symington and A. Thomson, 'Lab. Rep. R.C.P.Ed.,' 1892, vol. iv, p. 238.

pressure and hæmorrhages at the time of birth; but Collier* shows that in many cases of diplegia congenital predisposition, as well as marked maternal states, play an important *rôle*. Cases of infantile cerebral palsy naturally fall into the four varieties of hemiplegics, paraplegics, diplegics, and monoplegics, spastic conditions of limbs being found in each, with degrees of mental impairment by no means proportional to the physical defects.

Eclampsic cases occupy, for the reasons previously stated, a borderland position between the congenital and non-congenital class. It is not always easy to say whether they are the result or the cause of a damaged brain, but anyhow we may regard them as elements in a vicious circle. Epileptic cases fall very much under the same category, though the fits may not appear until a developmental crisis, *e. g.* second dentition or puberty.

Traumatic cases, again, for the most part owe their real origin to predisposition. The mental impairment varies very much in different cases, and in some may be very mild indeed, amounting, perhaps, simply to backwardness or eccentricity.

Similar considerations apply to cases attributed to fright or shock, and to sunstroke.

Meningeal and encephalic inflammations of toxic origin occurring sometimes in the course of acute febrile attacks, sometimes independently, are doubtless responsible for many cases of impaired brain action; whilst others are classed by Bourneville as due to (1) parenchymatous encephalitis and to (2) atrophic sclerosis.

Mention must be made of the hypertrophic variety of idiocy—to be carefully distinguished from hydrocephalus—described by Bourneville as *sclérose tubéreuse*. Limit of space will only permit a passing reference to the family type of infantile cerebral degeneration designated amaurotic idiocy.† Various cerebral malformations and deficiencies, pathological as well as formative—*e. g.* porencephalus,—can here be referred to only as occurring in a certain number of cases of mental defect.

One typical class of cases occurring in childhood and youth, though comparatively rare, is of great pathological interest, viz. those of recent years included under the title of juvenile general paralysis, though described so long ago as 1883 by Dr. Judson Bury‡ under the more exact name of hereditary syphilitic dementia. In these cases endarteritis seems to lead to cortical sclerosis and

* 'Brain,' vol. xxii, part 3, p. 373.

† See 'Med.-Chir. Trans.,' vol. lxxx, p. 87. (Paper by Kingdon and Risien Russell).

‡ 'Brain,' part xxi, p. 416 *seq.*

atrophy of brain-cells. Though the typical stigmata of inherited syphilis are not always to be found, the family history (when fully investigated) will generally show the probable existence of such taint.

In referring to the types we have said but little of the mental symptoms, because it will save space to consider them in relation to diagnosis and prognosis.

First, we may remark in a general way that congenital cases are more likely to present stigmata of degeneration than those truly accidental, though the absence of such stigmata is by no means conclusive of the case being non-congenital. As regards prognosis, Dr. Langdon-Down's* words may be quoted, that it is hopeful, "contrary to what is so often thought, inversely as the child is comely, fair to look upon, and winsome." As a rule there is more prospect of improvement in a case of simple arrested development than in one of structural brain lesion.

With regard to what appears to be a simple case of primary amentia—*i. e.* one not presenting any typical physical peculiarity,—we shall be wise to note the points of difference, both in physical and mental development, between the patient and a normal child of similar age, as our diagnosis will have to rest upon the comparative retardation of the mental and bodily faculties. A baby who does not take notice at the usual time and seems to have no desire to hold up its head or to use its hands or feet, is, if not incapable merely on account of physical debility, usually mentally defective. As the time for walking and talking goes by without any effort to use its limbs and to speak, the nature of the case becomes more obvious, and the prognosis will depend upon the degree and depth of incapacity. Family history—*e. g.* neurotic inheritance—will also help us. If, however, the size of head be notably small — say at six months 15 inches instead of 17 — and the form characteristic, we diagnose microcephaly; and in this case we may prognose fair development of the sensorial and muscular powers, but little concentration of thought, and a mental capacity limited by the defective development of brain. In hydrocephalic cases, if active mischief have subsided, though the child is backward in walking and talking, and may be subject to fits, the degree of mental impairment may not be very marked, and considerable improvement may result under suitable training. Mongolian imbeciles are not infrequently confounded with cretins, but they are more vivacious than the latter, their skin is not a loose investment as in cretinism, and they have more or less obliquely placed palpebral

* 'Obstet. Soc. Trans.,' vol. xviii.

fissures (which cretins have not), and Mongols have frequently a well-marked epicanthic fold. Cretins have no thyroid gland, but sometimes fatty tumours in the posterior triangles of neck. Both have large tongues, often protruding, but typical Mongolian tongues are transversely fissured, while the cretin tongue is simply coarse. The cretin head is larger than the Mongolian, flattened often over the position of the anterior fontanelle. Mentally the Mongol is fairly responsive, at any rate expressing himself in a few words in a gruff voice; he is fond of music, and will beat time, and is motorially imitative. The cretin (untreated) has been well compared to a "toad-like caricature of humanity," responding very slowly, if at all, and functionally inactive. As regards prognosis, the Mongol will be capable of some amount of instruction by imitation; the cretin of none, until subjected to thyroid treatment, when he will progress more rapidly than the other. But the range of improvement is probably limited in both, and the simply convoluted brain of the Mongol corresponds with a simple intelligence characterised by an entire lack of initiative.

With regard to the class of cerebral infantile paralytics the diagnosis is fairly clear, and the mental prognosis—varying with the severity of the physical symptoms—is in many cases much more favourable than these disabilities would seem to indicate. Indeed, hemiplegics not infrequently learn to read, write, and calculate; and, what is more surprising, to handle tools with considerable skill. As an illustration of this statement the case of a hemiplegic youth for eight years under the observation of the writer at the Royal Albert Asylum, Lancaster, may be briefly cited. Admitted in 1885, when twelve years old, the subject of right hemiplegia with athetosis attributed to injury at birth, he rapidly developed graphic abilities in spite of his physical drawbacks, and after a course of scholastic instruction in writing, drawing, reading, etc., with suitable physical and manual exercises, he was trained to wood-work in the joiner's shop, where he gradually attained such control over his irregular movements that he became an expert workman, making tables, chests of drawers, and decorative sideboards. He showed a nice taste for wood-carving, and ultimately became so skilful in it that he is now employed as instructor in this art, and he is also a clever scene-painter. He is now practically ambidextrous, his right hand having been trained to be serviceable. The annexed illustrations (Figs. 7 and 8) of panels, not only carved but designed by him (the block for which has been kindly lent by the authorities of the Royal Albert Asylum) demonstrate what may be done in such cases by judicious training.

Eclampsic and epileptic cases are readily diagnosed. The degree

of mental impairment varies considerably in individual cases, and improvement depends very much upon the cessation of the fits.

Figs. 7 and 8.

Persistent "*petit mal*" is even more prejudicial than occasional severe fits.

As a rule, the mental deficiency which results from the various

forms of meningeal and encephalic inflammation is unfavourable as regards prognosis. Juvenile general paralysis is progressive, and usually terminates fatally in the course of four or five years from its onset.

A very cursory glance at the principles of treatment and training must conclude this paper.* First improve by all known methods the physical conditions of the patient, removing, as far as practicable, all obstacles to brain activity that are removable. Errors of refraction, of audition, must be remedied if possible; adenoids, present in so many cases (and especially in those of Mongol type), must be extirpated. The muscular system must be exercised and disciplined in view of known incapacities, the senses methodically cultivated, the personal habits regulated, and continuity of attention encouraged by attractive occupations, such as those of the kindergarten. Physical and manual training are for this class the keys of the intelligence. For the less defective a modicum of adapted school work—such as may be seen in "special schools"—will be appropriate if due regard be paid to the avoidance of fatigue. The lessons should, however, be mainly objective, and mere exercises of memory without understanding are worse than useless.

Though teaching of mentally deficient children must be largely individual, it should not be solitary, and social good qualities are best promoted by instruction with other similar children. Moreover a mentally deficient child, of whatever grade, is usually more easily and judiciously dealt with by teachers outside his own home, where there is often unconsciously a prejudicial reaction on the part of the parents, however well-intentioned. Of course, all engaged in the training of such a child, whether nurse, teacher, or doctor, must know how to obtain the confidence of the little patient, and to be successful such work must needs be a labour of love.

A CASE OF POST-BASAL MENINGITIS DUE TO THE PNEUMOCOCCUS LANCEOLATUS; RECOVERY.

By J. Porter Parkinson, M.D.,

Physician at the North-Eastern Hospital for Children, and at the London Temperance Hospital.

Anthony T—, aged 2 years and 2 months, was admitted into the London Temperance Hospital under my care on September the 4th,

* For details see Shuttleworth's 'Mentally Deficient Children,' 2nd ed., pp. 85 to 129.

1903, with a history of four days' illness with fever, vomiting, and cough.

On admission the temperature was 104·8° F., pulse 141, and respirations 70 per minute; and there were definite signs of pneumonic consolidation at the apex of the right lung both before and behind. The child was small for its age, its weight being 15 lbs. 9 oz. It was rather fretful, and had some cough. The forehead was rather unduly prominent, the anterior fontanelle admitted the tip of the finger, there were sixteen teeth, and general signs of rickets. The abdomen was swollen, with slight enlargement of the liver and spleen; while five or six loose, offensive, green motions were passed daily. Between the 6th and 8th of September the temperature descended, but only to rise again to 103° on the 10th; from this time for the following fortnight the temperature still remained raised, as a rule between 99° and 101° F. The physical signs in the right lung persisted till early in October, when they gradually resolved.

About September the 15th rigidity of the muscles at the back of the neck, which had been noted for the week previously, was found to be increasing, drawing the occiput well downwards; and gradually complete opisthotonos of the trunk muscles supervened, the legs being rigid and extended, the arms rigid, flexed at the elbow, with forearms pronated and fingers flexed over the adducted thumb. The patellar reflexes could just be obtained, and Kernig's sign was not well marked. The fontanelle was slightly bulged, and the fundus of the eye showed no abnormal changes.

On September the 18th half an ounce of clear fluid was withdrawn from the spine by lumbar puncture by Mr. Rhodes, senior resident medical officer. It was forced through the hollow needle under increased pressure, and was clear, forming a flocculent cloud later on. It contained a trace of albumen. A portion of the fluid was stained with methylene blue, and showed the *Diplococcus lanceolatus* with its characteristic capsule; the same organism was found in pure broth culture from the same fluid. There were no intra-cellular organisms. The condition of the child remained unchanged, the opisthotonos continuing very marked for about five weeks, and during this time the sight appeared to be lost, and there was no closure of the lids on rapid approach of the fingers to the eyes. The diarrhœa continued, and there was infrequent vomiting. The temperature remained slightly below normal during this period. There was no ear discharge at any time, and the membranæ tympanorum were normal.

The lung signs gradually cleared up, and disappeared by the end of the first week of October.

In the early part of November the opisthotonos gradually diminished and the sight returned, the child becoming interested in his surroundings, till during the second week he began to sit up in bed, and developed that voracious appetite which was described by Mr. Stephen Paget as sometimes occurring after cerebral injury or disease. At the present time he appears to have entirely recovered, and shows no traces of disease, either physical or mental.

The chief interest of this case lies in the fact that the cerebral symptoms, though clinically they were those of a typical case of posterior basic meningitis, appear to have been due to the *Diplococcus lanceolatus* and not to the *Diplococcus intracellularis*, as a pure culture of the former micro-organism was obtained from the spinal fluid. Most of the cases of pneumococcal meningitis complicating pneumonia affect chiefly the vertex of the brain, and they are said to be invariably fatal; but this case appears to show that the inflammation may be chronic and situated at the posterior part of the base, and that recovery may be possible. The whole case turns upon the identification of the micro-organism obtained by lumbar puncture, but the identification of this by an expert appears to be complete. Cerebral symptoms during the course of a pneumonia, especially when affecting the apex of the lung, are comparatively common, and, but for the discovery of an organism affecting the nervous system, this case might have been supposed to belong to that category; but in such cases the cerebral symptoms generally appear earlier in the disease, and their duration is shorter. In this child the definite cerebral symptoms did not appear till a fortnight after the commencement of the illness, and their commencement was signalled by a further rise of temperature, which continued for ten days, while their duration was six weeks.

This case also illustrates the value of lumbar puncture in cases in which cerebral symptoms appear during the course of other diseases, and it is useful in such cases to distinguish reflex nervous symptoms from those due to organic disease in the central nervous system. It is very probable that such complications are not as rare as has been hitherto supposed, for bacteriological examinations of the spinal fluid in the cases which recover have not been often recorded.

A NOTE ON THE COMPARATIVE MORTALITY OF BREAST-FED AND HAND-REARED INFANTS.

By Hubert Armstrong, M.D.,

Assistant Physician to the Infirmary for Children, Liverpool.

A short time ago, at the request of our Assistant Medical Officer of Health, Dr. Musson, I started an investigation among the mothers of my out-patients at the Infirmary for Children, with the view of attempting to find out the different proportions in which the babies of this city at the present time were being suckled and hand-reared. This failed to reveal anything of value, since it was soon evident that the comparative numbers of the latter were being augmented by the fact that so many of them were brought up for disease, incident to dietetic errors, from which the breast-fed infants escaped. However, I continued my inquiries in a slightly different manner, asking each woman on her first attendance how she had reared all her children, the ages at which those not now living had died, and the cause of their death. Below I give a synopsis of the results.

The children were divided into four classes:

Class 1.—Those wholly breast-fed up to six months or over.

Class 2.—Those breast-fed up to the same age with the addition of other "foods," cow's milk, biscuits, and so on.

Class 3.—Those entirely hand-reared from birth or shortly after.

Class 4.—Still-births, and those dying within twenty-four hours of birth.

The last are ignored entirely. It proved impossible in the third class to differentiate between those fed on rational lines and otherwise.

The interest lies in the comparative death rates. The actual rates would be low for Liverpool, but in the first year the excluded cases must be remembered, and after that the varying ages of the subjects, and the fact that they were not all born and bred in the city, render the figures absolutely valueless as "vital statistics." Spread over a number of years, the only points in common to the children are that they belonged to the lower classes and were reared in the different ways described.

224 mothers had *1000* children (still-births, etc., excluded). Of these there were in:

Class 1.—689,
Class 2.—127,
Class 3.—184,

and 199 had died at varying ages, distributed as follows:

Class 1.—119 or 172·71 per thousand.*
Class 2.— 24 or 188·98 „
Class 3.— 60 or 326·09 „

Exclusive of the uncounted deaths within the day of birth, the following table shows the deaths in each class during the first year:

Class 1.— 58 or 84·18 per thousand.*
Class 2.— 17 or 133·86 „
Class 3.— 42 or 228·26 „

Total—117 or 117·00 „

During the second year there died:

Class 1.—25 or 39·62 per thousand.*
Class 2.— 4 or 36·36 „
Class 3.—14 or 98·58 „

subject to the error dependent on a certain number of the children being still in their first year. For a similar reason the rates for later years would be so inaccurate as to be worthless.

The causes of death as given by the more or less ignorant mothers are not tabulated. It is clear enough that the artificial feeding shows itself as the primary cause of intestinal disease and wasting in the first year, and that its debilitating effects, as evidenced by rickets and lung complications, and the inability to withstand the usual children's ailments such as measles, has not worn off in the second. There was a larger proportion of deaths of premature infants and from surgical accidents among the breast-fed than the others, whose exclusion would render the differences still more marked.

The figures are not presented as having any other value whatever than to point the oft-repeated moral that no child should be taken from the breast without the gravest consideration as to the absolute necessity of the procedure either to the mother or the baby. Regrettable as it is to see mothers who will not nurse their infants, it is even more so to frequently find babies deprived of their natural sustenance under medical directions, on account of some trivial ailment or passing dyspepsia which is only aggravated and confirmed by the change of diet. A certain number there will always be who are compelled to run this additional risk of an early death. Let us see that we do not add more to them than can possibly be avoided.

* *I. e.* per thousand of children in each class, and in the last table after deducting the deaths in the last but one.

A FATAL CASE OF STAPHYLOCOCCUS MOUTH INFECTION (ULCERATIVE STOMATITIS) FOLLOWING MEASLES IN AN INFANT.*

By Dan McKenzie, M.D.,

Assistant Registrar Central London Throat and Ear Hospital.

The course of events in the following case affords a striking instance of the oft-noted lack of resistance to the invasion of certain organisms induced by an attack of measles.

K. H—, a healthy, well-nourished girl of eighteen months, was attacked by measles on March the 2nd, 1903. The illness ran a moderate course, free from complication.

On March the 29th I was sent for on account of pyrexia reaching 104° F. with a rapid pulse. There was a general blush of the skin resembling somewhat the rash of scarlet fever, but not definitely punctate in appearance. There was no sore throat. A general moderate enlargement of all the accessible lymphatic glands was observed. The mother had noticed some blood in the sputum, which she had supposed to come from the chest. No consolidation of lung was found, and there was no dislocation of the pulse-respiration ratio. The temperature and rash persisted for three or four days, the rash gradually fading, and the temperature falling to normal rather rapidly at the end of that period. During the next eight days the temperature was subfebrile (from 97° to 99·8° F.) Then it gradually rose to 102° F. By this time (April the 18th) a fine branny desquamation was visible. The lymphatic glands had gone back to the normal size, with the exception of two submaxillary glands on the left side, which were still large and hard to the feel. On the alveolar margin of the gum above the left lateral incisor of the upper jaw a small round ulcer was discovered, about three millimetres in diameter, with a grey rough floor and undermined edges, surrounded by an areola of red and swollen mucous membrane. During the next few days the temperature remained high, the alveolar ulcer slightly increased in size, and the submaxillary lymphatic glands became larger and semi-fluctuant, while the periglandular tissues were hard and infiltrated. On April the 24th, under chloroform, the glandular abscess under the jaw was opened and scraped, about a tablespoonful of thick pus being evacuated. The ulcer on the gum

* Read before the Society for the Study of Disease in Children, February the 19th, 1904.

was scraped with a sharp spoon, and the broken down tissue, which considerably exceeded the limits of the ulcer, reaching down to the periosteum, carefully removed. The resulting raw surface was painted with carbolic acid.

Next day there was a recurrence of the roseolous rash which marked the beginning of the illness, together with a rise of temperature to over 104° F. The case was further complicated by the occurrence of diarrhœa, which continued henceforth throughout the whole course of the illness. The events of the following month showed that little or no good had been effected by the surgical measures adopted. The submaxillary abscess cavity certainly slowly filled up, but the ulcer in the mouth gradually increased in extent and depth, while no reduction in the height of the temperature occurred. Strangely enough the child's general condition at this period underwent marked improvement, probably owing to the excellent nursing and to the ability of the patient to take and digest large quantities of nourishment.

On the 22nd of April the alveolar ulcer was again scraped and painted with carbolic acid. It was found to extend from the alveolar margin of the gum above the first and second incisor and canine teeth to the junction of the mucous membranes of the gum and cheek, a very considerable increase in extent.

On May the 2nd, ten days after the appearance of the second roseolous rash, desquamation was observed.

On May the 7th the ulcer was scraped for the third time. By this time, although the abscess cavity under the jaw had filled up and the wound seemed about to cicatrise over, there had been no absorption of the dense infiltration surrounding the enlarged glands, and the whole of the submaxillary region on the left side was occupied by a hard brawny mass, which extended across the middle line beneath the chin. There was also some enlargement of the submaxillary lymphatics on this side. The left cheek was red and œdematous, and the breath foul. A day or two later the wound became infected.

On May the 16th the red rash appeared for the third time, and was followed in due course by desquamation. During the next six weeks the local conditions underwent a very slow but marked improvement. The ulcer in the mouth ceased to spread, the cheek grew less inflamed, and the submaxillary induration showed signs of being absorbed. But the wound enlarged by a process of disintegration of the subcutaneous connective tissue.

On June the 17th the final stage was reached when the patient

gave evidence of intra-cranial mischief in the form of sickness and vomiting, with transient lapses of consciousness, photophobia, retraction of the head, and stiffening of the erector spinæ muscles, while emaciation progressed rapidly. In a few days a passing paresis of the right arm and leg appeared (June the 23rd). Then clonic convulsions lasting twenty-four hours occurred, followed by coma, gradually deepening into death on June the 28th, three months after the onset of the illness.

A post-mortem inspection of the brain only was permitted. The cerebral symptoms were found to have been caused by sinus thrombosis.

A culture taken post mortem from the alveolar ulcer showed the *Staphylococcus pyogenes aureus.*

The treatment of the case consisted in the exhibition of iron, arsenic, cinchona, and remedies to meet the various complications as they arose. Potassium chlorate was tried at two different times, once in three-grain doses four times a day for six weeks, but no good effect followed its administration.

Antistreptococcus serum was injected, 10 c.cm. at a time, six times in all between May the 19th and June the 15th, generally without any distinct result, although once or twice a severe reaction with urticaria and restlessness occurred.

The roseolous rashes were presumably due to systemic infection from the infected localities. The heart and lungs remained unaffected throughout.

Mr. Jonathan Hutchinson, jr., reported some years ago a somewhat similar case to this one, in which, however, death seemed to have been directly induced by miliary tuberculosis. In his case, a child of twenty-one months, the ulcer or ulcers in the mouth persisted for nine months.*

The Society for the Study of Disease in Children.

A MEETING of this Society was held on January the 15th, 1904, at 11, Chandos Street, Cavendish Square, W., Dr. PORTER PARKINSON in the chair.

A Case of Transposition of the Viscera in a girl twelve years of age was shown by Dr. ERIC PRITCHARD. Examination showed that the heart, the

* 'Path. Soc. Trans.,' Lond., 1887, vol. xxxviii, p. 127.

liver, the stomach, and the spleen were transposed. The child had been delicate since birth, and had at one time been treated for enlargement of the spleen, owing to the liver having been mistaken for that organ. In reply to questions, Dr. Pritchard said the girl was undoubtedly deficient mentally, and that he would have a skiagram taken to see whether the aortic arch was on the right side.

A Case of Congenital Absence of the Left Arm in a girl of fifteen years was also shown by Dr. Pritchard. The stump ended about two inches below the elbow in a small excrescence, which presented the appearance of a rudimentary thumb provided with a nail. He regarded the case as one of arrested growth during an early stage of development, by a fibrous band which partially strangulated the growing extremity.

Dr. C. O. Hawthorne said that there were many cases which presented processes in the stump; he had seen at least two in which there were processes that might be claimed to be digits. In one of these there were five processes, and it was easy to appreciate the wider groove which represented the space between the thumb and the fingers.

Mr. Keogh Murphy thought there were two varieties of intra-uterine amputation. In the one class the extremity was rounded, and the tissues were freely movable around it; in the other there was some attempt at the representation of the digits at the amputation point.

A Case of Sarcoma with Secondary Deposits in a boy of two-and-three-quarters years was shown by Mr. A. H. Tubby. Seven weeks previously the child received a knock on the left leg, and soon afterwards the mother noticed a swelling there, which was poulticed. Three weeks ago he was again struck on the same leg, and also fell, striking his head. A swelling on the head formed soon afterwards. He now presented a definite tumour over the left leg, attached to the fibula, and a smaller tumour over the right parietal bone. The left inguinal and iliac glands formed a large adherent mass, but were not tender. Mr. Tubby commented on the direct connection of the growths with an injury. In 1889, in a paper published in the 'Lancet,' he had pointed out the direct relation of traumatism to sarcoma of bone, and he thought this was now generally accepted. The growth on the leg and the growth on the head both followed a direct injury to the part, and appeared almost simultaneously. He thought they might be looked on as separate local outbreaks of a specific disorder. The occurrence of pyrexial attacks, as had happened in this case, was not unknown in cases of rapidly growing sarcoma, and might complicate the diagnosis. He had seen a case of sarcoma of the lower end of the femur in a girl of thirteen where the temperature reached 102° F., and led a colleague to believe that it was a case of acute periostitis. This was disproved by an incision. In the present case he did not think any operative treatment was available, owing to the implication of the glands.

Mr. Lockhart Mummery suggested that the primary growth might have been in the glands of the pelvis without giving any external signs.

In reply to questions, Mr. Tubby said that the decrease in size of the tumour on the leg might have been due to an extension among the soft tissues in a horizontal plane. He had never seen a case in which it could be truthfully said that Coley's fluid was of any value.

A Case of Congenital Dislocation of the Fifth Cervical Vertebra was also shown by Mr. Tubby, in an infant of three months. The deformity

was noticed the day after birth, the confinement having been a normal one. No symptoms had been observed until a week ago, when vomiting came on and had occurred several times a day. At the base of the neck there was a sharp bony prominence, which corresponded to the fifth cervical vertebra. The summit of this process was formed by the left articular process, and the spinous process could be felt to the right of it, and not so prominent. On pharyngeal examination a depression could be felt on the left side of the affected vertebra. There was also congenital scoliosis, the curve being to the right in the dorsal region and to the left in the lumbar. When double extension was applied in bed the child seemed to be more comfortable, and her crying ceased. Another congenital deformity present was an absence of the costal cartilages of the fifth to the eighth ribs on the right side of the chest. There was no evidence of paralysis. Mr. Tubby regarded the case as one of dislocation of the vertebra, but was not prepared to say whether this was dependent on the scoliosis or not. He proposed to make an attempt to reduce the dislocation by traction and manipulation, but thought that as three months had elapsed, the prospect of cure was not good.

Mr. Howell Evans suggested that there was an absence of half the fourth cervical vertebra, and that the marked prominence felt to the left of the middle line was the superior articular portion of the lamina of the fifth cervical vertebra, which was unopposed. The small projection which could be felt almost in the middle line corresponded to the spinous process of the same vertebra. The scoliosis would be the result of the defective vertebra.

Two Examples of Congenital Dilatation of the Ureters and hydronephrotic kidneys, with hypertrophy of the bladder, and **Two Specimens of Tuberculous Ulceration of the Stomach** were shown by Dr. T. M. Fortescue-Brickdale (Bristol). **A Specimen of Congenital Cysts of the Lung** was shown by Dr. George Carpenter.

A Communication on the Relation of Certain Extra- and Intra-cranial Hæmorrhages in the New-born was read by Mr. T. Howell Evans. He considered that these hæmorrhages were dependent on the following factors: —(1) An irregularity in the moulding of the fœtal head; (2) this irregularity arises from the presence of accessory sutures in the situations where certain extra-cranial vessels anastomose with the intra-cranial vessels, and (3) the rise of blood-pressure which occurs during the reactionary period when the child is recovering from the birth trauma. In support of these views he noted the facts that these hæmorrhages occur in non-instrumental labours, and as frequently in breech as in vertex presentations, and with approximately the same frequency as the accessory sutures referred to. Selecting the parietal bones as examples, he said that when a parietal bone is developed from two centres of ossification, there is left a small space extending from the situation of the parietal foramen to the sagittal suture. At the parietal foramen the occipital artery communicates with the middle meningeal artery, and the occipital vein directly or indirectly with the superior longitudinal sinus. In a normal fœtal skull these vessels are secure from injury, but when the accessory sutures are present irregular moulding occurs at them and the vessels are lacerated. The author illustrated these anatomical irregularities and the allied conditions in anthropoid apes by a series of lantern slides.

Dr. G. A. Sutherland said that this subject was of extreme interest to physicians and surgeons, and that he considered Mr. Evans' paper was a

most suggestive one. They met with cases described as birth palsies in which the labour was normal, neither too prolonged nor too rapid, and it was difficult to understand how such cases were explained by the ordinary pressure theory.

Dr. C. O. Hawthorne said that any theory which was to account for these cases of intra-cranial hæmorrhages must take cognizance of the fact that they occurred in cases which had not been subjected to any undue pressure, some cases occurring in infants born at the seventh month.

The sequel of a **Case of Extreme Wasting** which had been shown at a meeting of the Society at Brighton in July last, was further described in a paper by Dr. W. C. Chaffey (Brighton). The patient was a boy of ten years who was extremely wasted, refused all solid food, but drank two and a half pints of milk daily, and presented no objective signs of cerebral disease. The case had been regarded by most of the members as one of hysteria. In October he developed bed-sores, had attacks of headache with screaming, and tonic contractions appeared in the extremities. These and other symptoms led to a diagnosis of tumour cerebri or meningitis. At the necropsy there was found to be chronic meningitis, chronic hydrocephalus, and an endothelial tumour about the size of a walnut attached lightly to the posterior aspect of the right optic thalamus. Dr. Chaffey commented on the rarity of endothelioma as a cerebral tumour. Taking the whole history of the case into account, he suggested there had been a chronic meningitis dating from infancy, and that this had induced the chronic hydrocephalus. The growth of the endothelioma might have been excited by an injury sustained in the school playground some twelve months before his death.

Dr. George Carpenter said he believed that not only might new growths be started by traumatism, but also other diseases, such as tuberculous meningitis, pneumonia, and pleurisy.

Editorials.

HER ROYAL HIGHNESS THE PRINCESS OF WALES AND 'THE BRITISH JOURNAL OF CHILDREN'S DISEASES.'

We have the honour to announce that her Royal Highness the Princess of Wales has graciously accepted the first two numbers of 'The British Journal of Children's Diseases,' in the future welfare of which she is pleased to be interested. This kindly display of concern in the promotion of the well-being of the young and the care of sick children, in addition to the Princess of Wales's well-known love for children, and the keen interest she

always displays in anything calculated to encourage the physical improvement of the Empire's future men and women, will, we think, create a stronger desire in this country for the acquirement of knowledge in relation to the prevention of infantile disorders, their more successful treatment, should they unfortunately arise, for the study of disease in children, and for the systematic teaching of this much-neglected subject, in respect to all of which we are so much behind foreign nations. The many infants and young children saved from unnecessary suffering, and conserved for the nation to enrich its national exchequer at a future date, and successfully defend its interests should they be imperilled, will not forget the Princess of Wales's part in that enterprise, which has for its goal the welfare of helpless little children and the predominance of the Anglo-Saxon race in the world. Instead of as at present being a flouted specialty in England, one which is not deemed worthy this year of a section at the Annual Meeting of the British Medical Association at Oxford, for no place has been found allotted to it there, the study of disease in children should rank foremost in medical matters, seeing that it has for its objective the eradication of disease in the adult by removing causes operating before birth or during infancy and childhood, which either tend to destroy life or impair man's mental and physical welfare, and thereby the nation's power and wealth. The Society for the Study of Disease in Children, will, however, fill this breach, for they hold their Annual Provincial Meeting at Bristol on Saturday, the 20th of June, and, judging from past experiences, this is sure to be well attended.

MILK DISPENSARIES FOR CHILDREN'S HOSPITALS.

Those a part of whose life-work it is to prescribe drugs for infantile ailments amongst the out-patients attending our children's hospitals are well aware of the preponderance of gastro-intestinal disorders among the bottle-fed nurslings which they are called upon to treat and expected to cure by means of the plentiful supply of drugs placed at their disposal by the boards of management.

Those medical men who have had experience in these matters are also alive to the hopelessness of the task set them in the absence of a proper dietary. Prescribing drugs under such conditions is a farce—they relieve the minds of the mothers, but they are of doubtful advantage to the sick infants.

Quite recently we were asked to inspect a large dairy farm in the country supplying milk to a well-known dairy company, which had been approached by the committee of management of a large children's hospital who were desirous of providing the inmates of that hospital with a PURE milk. What did we find as the result of our investigations? We found cows huddled together, some in ill-ventilated and dingy sheds, others in pitch-dark buildings with a foul atmosphere, all of them soiled with their own excrement and in a deplorably filthy condition, and with little, if any, bedding on the foul floors on which they stood and lay. One batch of dirty men with dirty hands and coarse dirty aprons was milking these cows in sheds which were plunged in Cimmerian darkness from an absence of light inlets. The environs of the cowsheds were a sea of filth, in which some of the more lucky animals were sticking with cow-like placidity. A visit to this place forcibly impressed us with the difficulties with which Hercules had to contend when brought face to face with the Augean stables.

The overflow from the milk coolers, placed in a building adjoining a manure yard, passed through a pipe in the floor to a dirty cattle trough, which was some forty yards distant in that yard. The junction with this pipe was by an india-rubber tube with a metal screw union, which was disengaged when not in use. The open pipe in that case helped to ventilate the dirty trough into the milk-cooling department. The milk was coarsely filtered before passing over the coolers, and the filtrate was found to contain a plentiful admixture of manure and stable refuse, as was obvious must be the case when inspecting the milkers' milk pails. There were other defects, but it is not necessary to enter into further details. The milk from this farm was deemed worthy of being supplied to the hospital, and inspection was invited; indeed, one of the advantages urged in its favour was the periodical inspections undertaken by a medical man other than the medical officer of health for the district.

Such periodical medical inspections, if this be a fair sample, are calculated to mislead the public; they are of no value, and no attention should be paid to them. Medical inspections apart from inspections by a properly constituted authority with powers to exact penalties for non-compliance with the law, which, by the way, will have to be materially strengthened, can do no good, for the self-evident reason that the medical inspector has no authority other than that given by the proprietor, who can at once terminate his engagement if he conceives his interests are being neglected. And this experience, which is not by any means an isolated one, raises another important question, and that is the necessity of having such dairy farms under something other than perfunctory inspections by sanitary authorities. We would suggest that they should also be under the supervision and control of the metropolitan and other sanitary authorities in whose districts the milk is distributed, who would be more likely to keep a stricter watch over their proceedings than now happens. To effect this it will be necessary to obtain increased powers.

So much for this hospital search after the pure article. From this company an important urban children's hospital is being supplied with milk at the present time. Another company which tendered for the hospital in search of pure milk was not seriously considered, because a bacteriological examination of its milk was found to be so very bad, whereas that from the farm just mentioned, though not good, was a decided improvement on that. It would be interesting to inspect the arrangements of the former in the light of our present experiences. If the attempt to obtain a pure milk for a children's hospital be attended by such disappointing results, what must be the condition of the milk which its poor out-patients consume, and whose ailments, derived from its ingestion, the medical staff are called upon and expected to cure by drugs?

The search for a pure milk under existing regulations is impossible of realisation. It is, however, incumbent upon the boards of management of children's hospitals to supply the in-patients under their care with pure milk, and such can only be obtained by these bodies supplying their own milk, under wholesome conditions and skilled management, aided by expert medical and veterinary superintendence; and with this object in view they are invited to study

the Walker-Gordon methods of dairy-farming, which have been productive of so much good in the United States of America.

The nursling's sole food supply in the absence of breast milk is cow's milk, and seeing the lamentable loss of infant life in this country from dietetic errors, it is sheer waste of energy under existing conditions to insist upon it being given to the infant in a pure state. Pasteurization and sterilization are methods of precaution which trifle with the evil—the placing of the cart before the horse. In the absence of a pure cow's milk, suitably rendered to the infantile needs, there can be no success in infant rearing—deaths and chronic illnesses must still result, as they have for years resulted under existing conditions. The physicians in attendance at the hospitals should be able to provide the patients with what is really requisite for their cure, a *pure and suitable cow's-milk mixture*, which will be dispensed by the milk dispenser in the hospital milk dispensary, which will in the future rank with the drug dispensary. We do not wish to be misunderstood. We are not advocating percentage milk mixtures to the exclusion of other well-known methods of milk treatment, but whatever the method of dilution selected by the physician, which his experience dictates, that selection should be dispensed at the hospital for the sick out-patient infant. Whether the milk should be supplied in part or wholly at the expense of the hospital or at that of the patient must depend upon the financial necessities of that patient and upon the funds at the disposal of the hospital for that purpose. These are questions which do not affect the principle of this advocated reform in the treatment of hospital out-patients, and if the justness of the truth of the principle be granted, then to put it into practice is a matter of no great difficulty. Improvements in the methods at first adopted may be expected to arise from the experience gained in their operation.

It is quite easy to raise a host of objections to such a plan as that advocated. The difficulties of getting the milk to the patients, especially if they reside at a distance, will be advanced; but the hospital boards of management at first should content themselves with supplying the milk to patients living within a reasonable radius of the hospital. To those living outside that radius in the fulness of time other institutions and boards may lend their aid in the good

work, and the poor will then be able to obtain a pure and suitable milk for their infants on presentation of a physician's prescription at local milk dispensaries.

Nor must the fact that the poor are incapable of properly conserving the milk when supplied to them in a pure state be advanced as an excuse to delay this necessary reform. The poor would have to be personally instructed in such matters, and such instruction could well be given by the hospital boards of management supplying the milk, and not only as to the conservation of the milk, but also on the management of their sick infants.

The supply of milk to the in-patients and out-patients can well go hand in hand, and the fact that when the patients leave the hospital they must, under the conditions now existent, return to a contaminated milk must not be used as an argument against the proposed plan. The same applies to the sick child returning in health from the convalescent home in the country to the unhygienic surroundings of the city slum.

Modern urban children's hospitals not only require pure milk for their patients, but a country branch is likewise a necessity, and at that country branch, which should not be too far removed from the parent institution, an up-to-date dairy farm should be attached. Here, too, a laundry could well form part of the establishment, and soiled linen should not be washed on the premises, as is the custom in some badly managed urban children's hospitals.

In these days of quick transit by road-motors there should be no difficulties other than financial in bringing about such a scheme.

The attention of the boards of management of children's hospitals is therefore drawn to the necessity for the inauguration of milk dispensaries as part of their hospital equipment. They should put a stop to what at present is a reproach to such institutions, the distribution of drugs to the out-patients, often at a charge of so much per bottle, which helps to swell the hospital coffers, for the relief of ailments which are due to unwholesome milk. Such ailments can be cured by dispensing the appropriate milk, for which a charge can be made with perfect propriety, and without sacrifice of dignity.

It is idle to raise lamentations about physical degeneration so long as the young are dragged through infancy in such a careless manner,

and to the detriment of their future mental and physical prospects. The medical boards of children's hospitals must wake up to their responsibilities in this matter, and point the way to their boards of management by seriously taking in hand the subject of hospital infantile dietetics, and, if necessary, by urging them to appeal to the public to provide funds to bring about these much needed reforms. In the case of the smaller children's urban hospitals dairy farms could well be undertaken on co-operative principles, and the suggestion is offered to such institutions. Children's hospitals must take the lead in instituting reforms in infantile dietetics. Such reforms, praiseworthy though they be, should not be left to the initiation of well-meaning sanitary authorities—they are apt to be badly advised and injudicious in the selection of their methods from an expert medical standpoint. Though children's hospitals should be pioneers, it is clear that the question is one of national importance. The time must come when even the children of the poorest parents will be able to obtain in every city milk, the purity of which is above suspicion, and modified according to their individual necessities.

THE LIVERPOOL COUNTRY HOSPITAL FOR CHILDREN.

In the year 1898, in consequence of an experience extending over many years, which proved that children admitted into an institution devoted to the care of incurables (where they were meant to end their days) very frequently, instead of dying, became well and strong and able in later years to earn their daily bread, and in consequence also of a recognition of the fact that such children suffering from chronic ailments could not be dealt with in any but the most temporary way in the general hospitals, where the beds are urgently required for acute cases, a number of enlightened citizens in Liverpool determined to establish in an adjacent country district an institution conducted on the lines of a modern hospital, where children suffering from chronic diseases could receive active medical and surgical treatment from first to last without any limitations as to time. Early in 1899 the Lord Mayor, Mr. William Oulton, called a meeting at the Town Hall, which was attended by a large number of citizens,

who so warmly and sympathetically appreciated the nature and objects of the new scheme that by November the 4th of the same year sufficient funds had been subscribed to enable the committee to open a ward containing twenty beds, placed at their disposal at an annual rental by the authorities of the West Kirby Home for Convalescent Children. The hospital thus inaugurated was opened by Sir Edward Russell, who, in the course of his remarks, said: "The hospital, he believed, would be looked upon as a great experiment to be followed in other parts of the country, and he was convinced that, if they kept their principles in view, the hospital might be the beginning of a national undertaking, and that the country at large would realise the importance of so treating the rising race that nothing of which science could make a certainty should be left to chance."

The experimental stage to which Sir Edward Russell referred has now passed, and sufficient data have accumulated to enable those who have been watching the progress of the patients, both while in the hospital and since they have left it, to arrive at the conclusion that their anticipations have been justified.

The results have been so encouraging that the committee, at the Fifth Annual Meeting to be held on the fourteenth of this month, will present plans which have been prepared for the erection of a permanent hospital capable of accommodating in its completed state 200 children. In dealing with children who are the subjects of chronic diseases the term "incurable" is a purely relative one, many of the maladies from which they suffer being progressive and incurable only so long as they remain in conditions unfavourable to their welfare; and during the past five years it has become abundantly evident that prolonged treatment in the fresh air of the country, with freedom from worry and from unrest in an institution where plenty of good food and good nursing are available, has turned the balance in the direction of recovery in many cases which have looked unpromising enough when first admitted. One of the most striking manifestations of improvement, which is noticeable even in patients suffering from diseases which are usually associated with wasting, is the almost uniform way in which the children improve in their nutrition and become less anæmic within comparatively short periods of their

admission. These are important evidences of recuperative power and of the increased possibilities of the repair which they foreshadow; and that they result from treatment in the country hospital is rendered manifest by the fact that many of the children have necessarily been previously under treatment both in the city hospitals and in their out-patient departments without corresponding improvement in their condition. There is not the slightest doubt that many children, whether suffering from diseases which come under the physician's care, or from the tuberculous and other chronic conditions which require the surgeon's skill, have had their lives saved; and the absence of the time-limit furthermore has allowed of more conservatism in practice, with the result that joints have been preserved which might otherwise have required excision.

A point in practice which has been found to work admirably in the Liverpool Hospital has been the co-operation of the physician with the surgeon in every case. Each child is placed under the joint charge of these two officers, and the frequency with which the combination of resources has been of service to the patient is worthy of note and of the attention of those who may be contemplating the establishment of country branches for the city children's hospitals.

The patients have been retained for periods ranging from a maximum of over two years to a minimum of four months, the average duration being about seven months, and a feature of this prolonged hospital life is that all patients of suitable age who are likely to remain for more than three months receive instruction by a teacher appointed by the educational authorities, and besides their ordinary school-work they learn plaiting, clay moulding, knitting, and sewing. For the greater part of the day the little patients are, when weather permits, in the open air, or, when wet or cold, in a well-appointed sun-room, and in the summer-time the medical officers see many of the cases in the grounds of the hospital, where they lie in the sun or under the shade of a large permanent verandah. The children are exceedingly happy, and the whole scheme has proved to be one of unqualified success, worthy of adoption by all the large cities.

AMERICAN CONGRATULATIONS—"A NEW PEDIATRIC JOURNAL."

Under the latter heading our old and esteemed friend and colleague 'Pediatrics,' in an editorial article, is pleased to draw attention to our new venture in the following kindly manner, which we have much pleasure in reproducing for our readers' benefit:—"Many of our readers will remember that in the early days of 'Pediatrics' a special European edition was published in London. This was in 1896, but for one reason and another it failed to flourish in its English field, although at home it grew to be the leading journal in the specialty. It was our fortune at that time to be associated with Dr. George Carpenter, whose name still is to be found on our editorial page, as collaborator, and we tender our most hearty congratulations to him in his venture, 'The British Journal of Children's Diseases,' the first number of which appears in January, 1904. Dr. Carpenter, in his "Introduction," speaks of the early struggles of pediatrics in England, and frankly admits the leading position taken by American pediatrists. 'The Americans,' he says, 'at that time, be it understood, were far in advance of Englishmen in all matters relating to children's complaints,' a position that we think the American pediatrist of to-day holds in respect to the world at large. There is no country in which pediatric work is so well supported and where it is taken up from so many sides as here. We are the more pleased to see this new journal, recognising in its birth the awakening of a permanent interest in one of the most important branches of medicine. Given healthy children we cannot fail to have healthy adults, and we welcome all aids in bringing about this desirable result. We congratulate Dr. Carpenter on the appearance of this new journal, and wish for it a most hearty success."

Excerpta Puerilia.

The Philadelphia Pediatric Society and The Society for the Study of Disease in Children.—That the old country is not moribund, but has merely been in a condition of trance, and when aroused can accom-

plish good work is evidenced by the congratulations we have received on behalf of The Society for the Study of Disease in Children from the Executive Committee of the Philadelphia Pediatric Society, who state that the three volumes of the 'Reports' of The Society for the Study of Disease in Children have been much admired by many of their members, and that they propose devoting their surplus funds to the production of a similar publication. We wish our American colleagues every success in their venture, and we hope to study with pleasure and profit the Transactions of the Philadelphia Pediatric Society at no very distant date.

Diminution in the number of children and milch cows in Great Britain.—Mr. Robert Turnbull, the agricultural statistician, in the 'Agricultural Gazette,' draws attention to the fact that, according to the 1901 census, there was an increase of the total population of six and a half millions, and of this number five and a half millions was in respect to those over fifteen years of age. The number of people over fifteen formed slightly more than two thirds of the whole population of England and Wales, while the children under fifteen formed slightly less than one-third. On the basis of this proportion the number of children should have been at least double what it is. The general public are under the impression that the increase in the number of children is immensely greater than the increase among those of greater age, but Mr. Turnbull's figures will dispel that illusion; and they draw forcible attention to the unnecessary waste of child life in this country, which, unhappily, has been for long enough so apparent to some of us. This vital question bears upon our future prosperity and our influence as a great power. A decreasing child population and a coinciding diminution of mental and physical powers among the survivors are not the materials with which to preserve our possessions or found fresh empires. Mr. Turnbull also is of opinion that our children receive too little milk, because the number of our dairy cattle is less than it should be. In 1891 there were eighty cows per thousand of our people, whereas in 1901 there were only seventy cows per thousand—an increase in the population of twelve per cent., and a diminution of our dairy cattle of two per cent. In 1891 the milk supply for two persons was a little more than three-quarters of a pound, but in 1901 the supply was only two-thirds of a pound. He ascertains that the average quantity of new milk which is required for all household purposes is six and a quarter hundredweights per head of our population whereas at the last census that supply was only equal to two and a

quarter hundredweights per head. The importance of a plentiful milk supply for young children cannot be over-estimated, and the value, therefore, of the milch cow to our childhood is incalculable. We hope for not only an increase in their numbers, but we urge the speedy adoption of methods which will ensure for these animals a perfectly healthy existence and the delivery of their produce to the public in a pure state. By adopting hygienic principles the dairy-farmer will obtain much more milk from the animals, and it will therefore pay him to be cleanly, and we give him this friendly advice. Failing voluntary reform, which at present seems unlikely to take place, the Legislature must take his instruction in hand—the public are becoming weary of him and his equally unsatisfactory confederates.

Physical degeneracy.—One of the half-penny daily papers enters a protest against the outcry about physical degeneracy, and says, "Look at the modern woman," giving as an illustration a hockey player of the female sex. There can be no doubt that amongst some classes the physique of woman has improved. For the last twenty years one has only had to compare the girls of the better classes with their mothers to be assured of this fact. But, allowing this to be true, and that tennis, bicycle-riding, and other athletic pursuits have had something to do with the increased development of girls who indulge in such pursuits, it is necessary to remember that these girls form a very small part of the community. To note their existence and to suggest that their healthy appearance is due to a more vigorous activity during the period of growth than was allowed during the girlhood of their mothers is permissible, but it would be a mistake to assert from the appearance of so small a section of one sex of the English race that the physique of the whole nation is improving.

Cigarette smoking by boys.—This subject has continued to be a topic in some of the daily papers. According to one of them, a schoolmaster who has a class of seventy-one boys between the ages of eight and thirteen asked those who smoked to stand on the forms. Sixty-seven stood up, and the four who remained seated "were looked at with suspicion." This seems to us rather a large percentage, and if the four who remained seated were justly "looked at with suspicion," we can hardly help thinking that some who stood on the forms feared ironical jeers from their schoolmates if they classed themselves with the "behind-the-times" non-smokers more than they did a lecture from the schoolmaster if they associated themselves

with the smokers. There can be little doubt that it is not the pleasure of smoking, but the idea that it is grand or manly that leads the majority of boys who smoke to indulge in the practice. Even with many adults it is not the flavour of the tobacco or any soothing effect upon the mind that is the explanation of their use of the pipe or the cigarette. It is one means of affording relief to a nervous craving a man may have when he is idle for something to do, if it is only for something to handle with his fingers. A cigarette to a man is what knitting-pins are to many women.

The care of poor children in France.—Napoleon, says the 'Yorkshire Daily Post,' did not forget the children, and he planned a scheme of education on a "broad liberal basis" which forms the foundation of the educational system in France at the present day. The Napoleonic system is described as embracing "a sort of official fresh-air curriculum." A considerable percentage of the children are sent in batches to the country for twenty-one days. In the forests of the Jura the boys chop wood, dig, weed, and hoe "with all the zest the Paris gamin alone can bring to such unwonted pastimes." In the green pastures of the Vosges the girls feed poultry, learn to milk cows, make hay, and help in the garden and orchard. The boys, too, who are sent to the sea are said to add fishing to farm-work. All this, it is needless to remark, displays careful forethought and admirable organisation. The care of poor school-children is, however, not confined to giving them three weeks' holiday every year. The way in which the "French Republic fulfils its duties to the humblest of its children is perhaps more complete and more thorough than in any other administration in the world." Both the feeding and the clothing of the poorer children are looked after. Attached to every school is a special fund entirely devoted to supplying creature comforts to the more needy of the scholars.

3585 babies.—Under this heading the 'Daily Mail' publishes an article upon the causes of death of babies by misadventure in London during last year. 1684 died of burns and scalds, 481 were overlaid, and 1420 are said to have died from improper feeding. It has always seemed to us that many of the deaths attributed to overlying are not in reality due to that cause. We have known a case where a baby died suddenly in its cot while its mother was sitting complacently at work by its side. Had the mother been in bed with the infant, death would probably have been attributed to overlying. Several cases of so-called overlying are, with little doubt, cases of death from laryngismus stridulus. Allowing, however, the

statement that overlying is frequent to be true, a simple but more or less ingenious arrangement devised by a gasfitter, which obviates the danger of overlying and at the same time does away with the necessity of a mother getting out of bed to quiet the infant, should be mentioned. He fixed gas-pipe uprights at the head and foot of the bed, and from these slung a hammock, in which the baby was placed. It was then safe from danger, and when inclined to be restless the mother had only to put up a hand and give it a gentle rocking. In connection with this subject of sudden death it should also be mentioned that those who believe that an enlarged thymus is responsible for this form of death will no doubt attribute some cases of so-called overlying to this cause. With regard to the large number of deaths attributed to improper feeding, it can hardly be said that the number can have been over-estimated. These cases are gleaned from amongst the poor. If cases were added in which infants had died more or less directly as a result of improper feeding amongst the middle and upper classes, we think the death-roll would be materially increased. The number of deaths from burns and scalds is large. It is stated that nine-tenths of these deaths were due to playing with matches. The simple precaution of hanging the matchboxes by a string on the wall out of reach of the eldest child, which is suggested, it is said would have saved considerably over a 1000 deaths.

Defective children in schools.—Of the children of London of school age, one in 955 is blind or deaf, or both, one in 300 is mentally defective, and one in 510 physically defective. For these children the School Board has provided schools, and the committee which has the supervision of this work has issued the annual report. There are eight day and two residential schools for the blind, with an average attendance of 205 pupils; fifteen day and two residential schools, with an average attendance of 516, for the deaf; sixty schools for the mentally defective, having an average roll of 3063; and eight physically defective centres with a total roll of 433 pupils. Similar schools exist for at least some of these divisions of defective children in a few of the large provincial towns, but there is room for much more to be done in this direction. The taking of cripple children to school by means of an ambulance and the fitting of them for some calling in which they can earn their daily bread is alone a branch of work that should delight the heart of any philanthropist. The training of the mentally defective child does not appeal so readily to the imagination. Perhaps the blessing of schools for such children is

almost as much a boon to the mothers as to the children themselves. Yet it is needless to add that in some cases it is remarkable how a feebly equipped mind can be developed upon certain lines.

Abstracts from Current Literature.

Chronic interstitial nephritis.—James E. H. Sawyer ('Birmingham Med. Review,' August and September, 1903). This paper on chronic interstitial nephritis in children is founded on a collection of twenty-four examples of the malady. In speaking of the etiology of chronic interstitial nephritis in children, the author supports the view that syphilis, either hereditary or acquired, may be the chief factor in the causation of the condition in children, and may play a greater part in the etiology of the disease in adults than is generally attributed to it. In many of the cases which are collected in this paper, dilatation of the ureters or of the pelves of the kidneys is recorded, and the number of times in which this has been observed is sufficient to suggest that some obstruction to the exit of urine may set up interstitial changes in these organs. The dilatation, however, is only slight, and is exaggerated by the atrophied condition of the renal substance, so that in all probability the condition is secondary to the interstitial change. There is evidence in favour of the changes in the kidneys being the results of a primary inflammation of the interstitial tissue of the organs, and not a final stage of parenchymatous nephritis. The chief arguments in support of this view are that the patients suffer rarely from renal œdema, and that in many cases there is a history of polyuria since birth. The disease seems to be rarely caused by scarlet fever or by any of the specific fevers. With regard to sex, the condition appears to be slightly more frequent in females than in males, since fourteen of the patients were girls and only ten were boys. The morbid anatomy of this form of renal disease in childhood is very similar to that of the malady as it is found later in life. The accompanying changes in the other organs of the body appear to be even more constant in children than in adults. This is shown very clearly in a table where the number of times in which certain structures were affected are compared in the two periods of life. It is an interesting fact that in many of the cases there is a considerable inequality in the weight and in the size of the two kidneys. There are four symptoms which are given as pathognomonic of the disease, namely: (1) increased

arterial tension, with cardiac hypertrophy; (2) polyuria, the urine containing a small amount of albumen; (3) excessive thirst; (4) continued loss of weight. The facial appearance, the pigmentation, and other changes in the skin are also described. Œdema is rare in chronic interstitial nephritis in children, and is only seen in the terminal stages of the disease, when the heart is failing. Intracerebral hæmorrhage occurred in three of the cases. Albuminuric retinitis was found to be present in four of the patients, and is probably more frequent, as in only a few instances were the fundi examined. Uræmia is shown to be the most frequent cause of death, and appeared sooner or later in nearly all the cases.

Among the cases which are described there are five which have not been previously recorded, while the others are collected from many different sources. The first case, that of a boy aged four years, came under the author's own observation at St. Thomas's Hospital. There was a distinctly syphilitic history in the father. The patient had been sounded for stone when eighteen months old, but none was found. For six months previously to admission to the hospital there were frequent headaches and occasional vomiting. There was increased frequency of micturition, and a large quantity of urine was passed. Severe epistaxis occurred on more than one occasion. On admission to the hospital the child was rather pale and thin, and small for his age. The heart was hypertrophied. The optic discs were very pale, but otherwise appeared normal. The patient became increasingly lethargic, and died five days after admission into the hospital. At the autopsy the kidneys were found to be typically granular. The walls of the left ventricle were hypertrophied, and the aorta and all the arteries springing from the arch and from the abdominal aorta were considerably thickened. There are also recorded three cases taken from the records of the Children's Hospital, Great Ormond Street, which are typical examples of the disease. The children were aged ten years, two years and five months, and eleven years respectively. In the last of these cases there was albuminuric retinitis. An account is also given of a female patient, aged eighteen years, who was in St. Thomas's Hospital in 1902 under the care of Dr. Colman. In this case of chronic interstitial nephritis there were about thirty gummata of various sizes scattered throughout the liver, and one small gumma was present in the spleen. There was no history of syphilis obtained from the parents, but nevertheless the condition in the patient pointed to it being a congenital rather than an acquired affection.

Chronic interstitial nephritis is only in a comparatively small

number of children diagnosed before the death of the patient, and the condition in many cases is discovered almost accidentally at a post-mortem examination. There is a great contrast between the duration of the disease in children and in adults, since in the former, by the time that definite symptoms make their appearance, the period is short, on an average about one year, before a fatal issue occurs. JAMES SAWYER.

Infections of the new-born.—Hamill ('Archiv. of Pediatrics,' September, 1903, p. 641) includes under the name of infections of the new-born all those diseases which are most probably due to some form of microbial infection before, during, or after labour. Among these are mentioned melæna neonatorum, hæmorrhagic disease of the new-born, hæmophilia of the new-born, Buhl's disease, and Winckel's disease. Most cases occur in maternity hospitals. Possibly the infection is air-borne in a few cases, and in a small percentage are due to the mother's milk being infected by suppurative lesions in the breast. In others infected bedding, etc., or bath water may be the cause. He regards the chief mode of spread as a badly trained or careless nurse. The point of entry is usually the mouth, tonsils, pharynx, or some part of the alimentary tract. Post mortem the signs are those of "congestion" and "hæmorrhage." The onset of symptoms may be delayed beyond the fifteenth day. The chief symptoms are pyrexia, toxæmia, offensive diarrhœa, icterus, all kinds of skin eruptions, anorexia, rapid wasting, apathy, hæmorrhages, cyanosis, rapid breathing, and nervous phenomena. The essential factors in treatment are isolation, fresh air, food and stimulants.

EDMUND CAUTLEY.

Infantile insanity in its relation to moral perversion and crime is the subject of an article by Dr. McLane Hamilton in the 'Medical Record' for June the 20th, 1903.

Some writers hold the opinion that actual insanity in the young is very rare, but the literature of psychiatry is very rich in these cases. It is now recognised that many forms of adult insanity are also found in early life, primary limited delusional insanity, paranoia, paretic dementia, and even circular insanity being observed. Insane children sometimes have obsessions, which are rarely talked about, and an impulse is the first evidence of the mental mischief. In the majority of cases there is an apparent absence of the moral sense, and this is usually the case when homicidal acts are committed. Insane criminal perversion in the young may be due to idiocy, imbecility, or to a psychopathic state consequent on epilepsy; to true primary delusional

insanity; to a psychopathic state with delusive ideas and obsessions; and to paretic dementia and other adult mental diseases rarely developing in childhood. The first division is not discussed, the author merely mentioning that pyromania is exceedingly common in epileptic children. Paranoia in young children is not so common as the other insanities, and consequently crime among children, as the result of delusion, very rarely occurs. A large number of the reported cases of juvenile crime take place in children in whom there is an unstable degenerative condition, which may be the result of improper environment and unsuitable education or entire want of it. Defective heredity plays an important part in the production of children of unstable nervous development, and when to this is joined a vicious environment they become drunkards, thieves, or murderers. When the neurotic child grows older, defiance of society is taught, and a feeling of unrest is converted into delusions. The unstable condition often leads to alcoholism and sexual excesses in boys and girls even before puberty. The management of vicious and insane children is very difficult, for the interference of an injudicious humanitarian will do great harm, while, on the other hand, the unthinking disciplinarian, who will not admit that the irresponsibility may be due to disease, would have them sent to prison. The best treatment for them would be a good school, presided over by a wise and sensible man, or, for the worst cases, institutions where employment on the farm or in trades is provided, and thus they will be removed from bad environment and association with criminals. FLETCHER BEACH.

The pathology of feeble-mindedness.—In a paper in 'Ann. di Freniatr.' for June, 1903, Dr. G. B. Pellizi treats of heredity and some clinical symptoms in relation to the genesis and pathology of feeble-mindedness. In the degenerative, genetous, evolutionary, or common forms of idiocy (meaning thereby what is more scientifically designated *simple primary amentia*), pathological lesions can only be guessed during life; whereas in cases associated with infantile hemiplegia, diplegia, and other paralyses, precise lesions may be traced. König, indeed, suggests that idiocy and cerebroplegia are identical; this, however, in Pellizi's opinion, is going too far. He classifies 52 per cent. of his cases as evolutionary and 32 per cent. as pathological; 16 per cent. of cases were of doubtful origin. Pellizi has made a special study of forty selected cases, in view not only of their pathology, but of their educability. He finds neurotic heredity more frequent in the cerebroplegic than in the evolutionary cases, and concludes that infantile spastic diplegia may be (at any rate in

part) due to formative defect. This is in accord with what has been observed in this country by Collier, Batten, and others.

G. E. Shuttleworth.

Rickets and feeble-mindedness.—The connection of rickets with feeble-mindedness is discussed by Drs. Bourneville and Lemaire (of the Bicêtre, Paris), in the 'Archives de Neurologie' for September. It was found that rachitic changes of unmistakable character were present in 34 out of 435 patients in residence. The latter comprised idiots, imbeciles, and feeble-minded children, the proportion of rachitic cases amongst these amounting to 8 per cent. The malformations noticed were, in descending order of frequency, beaded thorax, deformity of the skull, facial asymmetry, and dental anomalies. Five cases of scoliosis and six of excessive curvature of the tibia were also noticed. Pelvic deformities were met with in only two cases. Another fact was also clearly shown, viz. that the mental backwardness of the patients was generally not congenital. Such infants appeared to be of normal intelligence during the first few months of their life, and it was only at the age of one and a half or two years that symptoms of idiocy manifested themselves. The majority of the children were free from anatomical 'stigmata of degeneracy' apart from the special deformity of rickets, a fact which suggested that the defect of the nervous system could not have been produced in the period of fœtal life. It was frequently noticed that the mental weakness of the rachitic patients, referred to above, made its appearance after an attack of infectious broncho-pneumonia or gastro-enteritis. It was also noticed that while in many cases mental enfeeblement was the sole sequel of the pulmonary or gastro-intestinal infection, in a few cases rachitic deformity of the bones alone resulted, and that the relationship of these sequelæ to one another was such as to suggest that one and the same toxic or infectious agency was the cause of brain degeneration (weak-mindedness and imbecility) and of disease of the osteogenetic process (rickets).—'Lancet,' November 21st.

G. E. Shuttleworth.

Profound idiocy with infantilism; considerable amelioration.—Dr. Bourneville contributes an interesting article in the 'Archives de Neurologie' for August, 1903.

The history of the case showed that the maternal grandfather of the child died from "paralysis of the brain," and the maternal grandmother, who was a drunkard, from cerebral congestion, and many cousins suffered from convulsions. Up to the age of nine months the

child was quite normal, but at that age he suffered from convulsions, which lasted for three days, and complete idiocy resulted. He could not speak, and there were unclean habits, want of use of the limbs, no expression, no power of attention, and arrest of dentition. The convulsions were repeated from nine months up to two years of age. From two to three years they became less in number, and finally disappeared when he was three years old. A slight amelioration of his condition then took place, and the paralysis of one of his lower limbs disappeared. Intellectually, however, there was no improvement; the attention could not be arrested; the physiognomy was still idiotic; and the child was deaf. He was admitted into the Bicêtre under Dr. Bourneville's care at the age of three years, and for the first three years no educational treatment was pursued, as the child suffered from scurfiness of the skin. At the end of this three years the child had become clean in his habits, some expression in the features could be noticed, and the attention could be fixed. At the end of 1895—that is, five years after admission—tics, from which he had suffered, disappeared. The child could then speak, had learnt to wash, dress, and feed himself, and practically required no assistance. At last he learnt to read, write, count, to work simple addition, subtraction, and multiplication sums, and to recognise and name persons and things. The affective sentiments were developed, and the child was fond of his mother and the persons who surrounded him. When admitted he was supposed to be deaf. He was not so in reality, but his auditive attention had not been developed. He was much below the average height. At the end of 1902 he was nineteen centimetres less in height than he should have been, and not only so, but there was absence of hair on the face, body, and pubes; the genital organs were little developed, and there was no sign of puberty, although the boy was nearly sixteen years old. FLETCHER BEACH.

Amentia.—An excellent, and in some respects novel article on "Amentia," from the pen of Dr. A. F. Tredgold, appeared in the 'Practitioner' for September, 1903. Dividing all cases into the two great classes of *primary* and *secondary amentia*, he points out the characteristic types of the former, with the complications involved in (*a*) gross anomalies of development, and (*b*) secondary morbid processes. Ascribing all cases of primary amentia to morbid heredity, he divides cases of secondary amentia into those due to (*a*) gross cerebral lesions; (*b*) nutritional defect; (*c*) special-sense defect; (*d*) degenerative processes. The paper is well illustrated.

G. E. SHUTTLEWORTH.

Mongolian idiocy.—In the 'Lancet' of December the 12th Dr. Fennell, of Darenth Asylum, gives particulars of three cases of Mongolian idiocy—a girl of 9, a boy of 13, and a man of 27,—in which he had found evidences of congenital malformation of the heart. This is interesting in view of Dr. Archibald Garrod's published observations on young Mongolians and the statements of others of wide experience with the class, that it was rare to find heart malformations in such children surviving the age of three years. G. E. Shuttleworth.

Thyroid treatment of Mongolian idiocy.—Thyroid treatment in cases of Mongolian idiocy, infantile myxœdema, and arrested physical development was commended by Dr. Bourneville (of Paris) in a paper read by him at the Congress of Alienists and Neurologists recently held at Brussels. He states that good results may be expected in all cases of these diverse categories; and, except when the epiphyses are ossified, physical growth has undergone a regular and considerable increase (as shown by radiographs).

G. E. Shuttleworth.

Non-Semitic amaurotic idiocy.—In No. 45 of the 'Muenchener Medizinische Wochenschrift' (November the 10th, 1903) Dr. Arthur Mülberger gives an account of two sisters, of *German, not of Jewish parentage*, showing typical symptoms of familiar amaurotic idiocy. The younger child is stated to be $1\frac{1}{4}$ years of age, the elder appears about 3 years older. Fletcher Beach.

Infantile neurasthenia.—Cappelletti (in 'Rif. Med.,' No. 17, 1903) describes two cases of infantile neurasthenia in a girl of eleven and a boy of twelve respectively, and points out the following psychic phenomena as aiding the diagnosis of this condition, viz. (1) defective attention, (2) taciturn disposition, (3) impaired memory, and (4) diminution of will. Physical signs are—(1) pain in head, (2) vertigo, (3) insomnia, (4) myasthenic symptoms, (5) gastro-intestinal disturbance, (6) genital excitability (masturbation), (7) irritable heart, (8) vaso-motor and secretory disturbances, (9) degenerative stigmata. Though many of these symptoms appear in other conditions, the period of their onset may help in diagnosis, and if neglected may issue in an alienation of the whole psychic life. The "state of doubt" is universally present, though met with in varying degrees, sometimes concerning itself about such small details as looking to see if a door be shut, reading and re-reading letters, etc.

The social and moral life of such a patientr equires to be regulated with discretion.

G. E. Shuttleworth.

Juvenile psychoses originating in whooping-cough. — Dr. Rudolf Neurath, of Vienna, has made some observations which are interesting in relation to juvenile psychoses and neuroses starting with an attack of whooping-cough. He found in sixteen out of seventeen cases extreme thickening of the pia mater and arachnoid, and a new proliferation of connective tissue, with lymphocytes penetrating the meninges. In many cases there were also hæmorrhages in the pia mater, and between the meninges and the brain. He discovered in the grey substance dilatation of the lymphatics, œdema, hæmorrhages varying in intensity, hyperæmia, and accumulations of white blood-corpuscles along the vessels. No micro-organisms were found. There was a remarkable correspondence between the clinical symptoms and histological changes found in the meninges and brain. Cases with highly developed nerve symptoms, convulsions, pressure phenomena, dulness, and somnolency showed the above-described histological changes, and markedly the accumulation of new cells in the meninges.

G. E. Shuttleworth.

Hysteria in childhood is treated of by Thiernich and by Bruns in the December number of 'Jahrbuch f. Kinderheilkunde.' Young children do not present hysterical stigmata (according to Thiernich), and hysteria is with them mono-symptomatic. The most common manifestations arise from auto-imitation, as when diarrhœa persists for psychical reasons, and the headaches of school-children are often hysterical, as is shown by their disappearance when some simple, perhaps inert, drug is administered. Imitation of their parents is also a cause of hysterical affections in childhood, and Thiernich suggests that much, perhaps all, hysteria in children is due to injudicious up-bringing. Bruns gives statistics as to frequency of hysteria in children under sixteen. Such patients form about 2 per cent. of all his various cases, hysteria being about one-fourth as common in children as in adults. His youngest cases were three years old; most occur between the ages of seven and twelve. Paralysis with contractures, neuralgia of joints, speech disturbances are amongst the forms seen; 90 per cent. are curable, but the child must be removed from home to get good results.

G. E. Shuttleworth.

Symptoms of suffocation in an infant caused by a piece of coal lodged in the trachea; operation; recovery.—Walker Downie ('Lancet,' January the 16th, 1904).

A boy aged 15 months was put to play on the floor by its mother, who on her return found him near to the hearth crying and gasping for breath. The child was fretful, would not eat, had difficulty of breathing and frequently cried out with pain. His doctor when called in found the child very ill and sent him to Glasgow. Dr. Downie saw him 10 p.m. of the day following the first symptoms. The child was pale and exhausted, but his cry clear; air entered both lungs badly. The child was chloroformed; an inspection of the larynx showed it to be normal. The trachea was opened and a piece of coal was found firmly fixed at the fourth ring. This was removed, and breathing was immediately restored to the normal; there was a little transitory reactional fever. The tube was left in the trachea for a few hours as a precautionary measure. The recovery was quick and uneventful. R. Lane.

Reviews of Books.

The Nutrition of the Infant. By Ralph Vincent, M.D.Durh., M.R.C.P.Lond. Pp. 288. Publishers: Ballière, Tindall, and Cox.

It is difficult to understand the *raison d'être* of this book, or for what particular portion of the medical profession it is intended. Apparently the publishers doubt its merits being sufficiently great to command success if only aided by the criticisms of the medical press. At any rate it has seemed to them, with or without the connivance of the author, advisable to advertise the book, and to get it reviewed in the non-medical press. Yet in no sense of the word can the book be regarded as a popular one, or as written with a view to impressing the general public. The chapters on human milk, cows' milk, and substitute feeding are written on a scientific basis, and are full of tables of analyses quoted from other writers. Largely these chapters are an epitome of Rotch's writings on the subject, with a few added tables of analyses. The first twelve chapters (200 pages) deal with the subject of infant-feeding and development. Next come four chapters (65 pages) on nutritional disorders, and finally a chapter on infantile mortality. The earlier chapters are much too full, much too heavily weighted with tables of analyses, and insufficiently precise in directions as to feeding, to be of very great value to the general practitioner. To the expert some of these tables will be valuable for reference. The chapters on nutritional disorders are quite suitable, and will prove useful to the general practitioner. As a whole the book may be regarded as an honest attempt to combine in one

volume physiological and chemical factors in normal nutrition with the pathological results of abnormal nutrition. There is little indication of original observation, and not much of practical experience. Perhaps that could hardly be expected, and we should congratulate the author on bringing out such a satisfactory exposition of the subject before his experience and opinions have reached a greater maturity. We cannot endorse the enthusiasm with which he supports the system of percentage feeding, but on the whole there is little in the work with which we do not cordially agree. The book is well printed.

E. Cautley.

Modern Methods in the Surgery of Paralysis. By A. H. Tubby, M.S.Lond., F.R.C.S.Eng., and Robert Jones, F.R.C.S.Edin. Macmillan and Co., Limited.

Mr. Tubby and Mr. Jones are well known for their work in the surgery of paralysis, and the present volume is mainly a collection of their cases and opinions, with which readers of the journals are already familiar. Of the three sections into which the work is divided the first, devoted to infantile paralysis and the resulting deformities, is the most complete. Naturally the bulk of the space is given to the operations of tendon-transplantation and arthrodesis. No methods have marked so useful an advance in treatment as these. It is the fate of a new operation to suffer while finding its level, but few have been so immediately accepted and so little abused. There are excellent paragraphs on the mechanical treatment of the paralysed but improving joint. This is a subject which Mr. Jones has taken great pains to emphasise in his previous writings, and his views are well stated here. As the authors say, the whole principle of treatment is to place the joint in a position favourable to the recovery of overstretched but not paralysed muscles. Thomas was the first to call attention to the effect of the constant overstretching of a weakened muscle by its healthy antagonist, and to show how much may be done in such cases by proper appliances. The authors do well to call attention to the neglect which has hitherto been part of this branch of treatment.

The various types of spastic paralysis are dealt with in the second section of the book. Perfectly just objection is taken to the indifference, for which some of the older neurologists are probably responsible, which has been associated with the treatment of these unfortunate cases. That much may be done by tenotomy, muscle-grafting, and the fitting of suitable apparatus is shown. But above all is stress laid on the educational factor, both of mind and muscle, and on the impossibility of treating these children in the ordinary hospital course. Each needs special attention for many months. One is glad to see that the new educational authorities in several of the larger centres are providing the special schools for which most of these cerebral paralyses are suitable.

The last section considers a long list of nervous diseases and the associated deformities. It is necessarily the most fragmentary and least satisfactory of the three. The work as a whole is well written and well illustrated by clinical reports; it is an excellent and timely monograph.

W. P. Montgomery.

Correspondence.

TRANSMISSION OF TUBERCULOSIS BY MILK.

To the Editor of The British Journal of Children's Diseases.

Sir,—I mentioned recently in the 'General Practitioner' the possibility of milk being contaminated by *human* tubercle bacilli, and thus setting up the disease in children and others. As I pointed out in an article in that journal, our milk is carried and stored under conditions which would render such contamination more than easy. Frequently one sees the milk churns standing in a draughty railway station, on the usual sputum-soiled platforms; goods trains jolt by, sometimes filled with the refuse of dust-bins or stable sweepings. While Koch may be perfectly right with regard to the transmission of bovine tuberculosis by milk, may we not, while agreeing with him, regard the disease as milk borne?

I am, sir, yours faithfully,

A. Percy Allan, M.D.

Croydon, January the 31st, 1904.

ENURESIS IN CHILDREN.

To the Editor of The British Journal of Children's Diseases.

Sir,—I received last evening the very interesting copy of your new Journal. It is curious that it should have come just when it did—*firstly*, because my Board have just asked me to certify that some cases of bed-wetting are easily cured, and some the reverse; *secondly*, because I have only this week given up trying to cure a case by the plan of dieting recommended in the paper by Dr. Percy Lewis. It did absolutely no good at all. We have a large number of cases in the school, and I have come to the conclusion that many of them derive no benefit from any kind of medicine. I have tried everything I could read, hear, or think of, and failed with all the remedies tried. In days long gone by I used to succeed fairly often by applying at bedtime a very broad strap (with a good deal of fuss, and a considerable noise of whacking, but very little pain) to the buttocks of the bed-wetters. But I had to give this up, because an inspector doubted whether I was justified in using such a remedy. The most curious case of cure I know of was that of a boy of thirteen or fourteen, a persistent bed-wetter, who had a truly severe attack of chicken-pox, and never wet his bed again. If experiments be justified in such cases, why not imitate, after a fashion, an attack of varicella by sprinkling with blistering fluid? Seriously, cutaneous irritation *of the proper areas* might do good.

I am, sir, yours faithfully,

Medical Superintendent.

February the 6th, 1904.